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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,295	05/24/2002	Pierre Goelff	4004-033-30	1170

7590 10/03/2002
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EXAMINER

KOPPIKAR, VIVEK D

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 10/03/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-2

Office Action Summary

Application No.

10/088,295

Applicant(s)

GOELFF ET AL.

Examiner

Vivek D Koppikar

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities: "Pyrogenous" is spelled two different ways in Claim 14. In line 3 it is spelled "pyrogenous" and in line 4 it is spelled "pyrogeneous." Appropriate correction is required.
2. Claim 29 is objected to because of the following informalities: In line 2, of Claim 29, "context" should be content.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 14-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what is meant by "pyrogenous" or "pyrogenic" silica. The specification does not provide a definition.

Claims 24-25 are indefinite because the refractive indices of both the intumescent layer and of the silica are not known.
5. Claim 18 recites the limitations "X " and "the atomic ratio "Al/Mg" in line 1. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1775

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 14-17, 19-20, 22-23, 26-27 and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 4,190,698 to DeBoel.

With regard to Claim 14-16, DeBoel suggests using a fire-resistant layer in between two glass sheets. The layer contains particles of silica as well as aluminum phosphate (Col. 1, Ln. 13-23). The formula for aluminum phosphate is $\text{Al}(\text{H}_2\text{PO}_4)_3$ so the P/X ratio is 3. De Boel fails to show that the silica is pyrogenous. However, absent a showing of unexpected results for pyrogenous silica, this is not seen as a patentable distinction.

With regard to Claim 17, DeBoel teaches using sodium aluminate in the fire resistant layer (Col. 1, Ln. 22).

With regard to Claims 19-20, 22-23 and 29, DeBoel teaches that the weight percentages of silica are less than 20% and more preferably less than 10 % by weight (Col. 23-27). The fire screening layer has a water content of 34% (Col. 5, Ln. 1-14). Since the water content and silica content are present in De Boel in essentially the same proportions as in the instant application, it is the position of the examiner that the intumescent layer would be sufficiently fluid to flow between the glass sheets.

With regard to Claim 26, the ethylene glycol is present in amounts of less than 10% of the weight of the layer (Claim 3).

With regard to Claim 27, DeBoel uses ethylene glycol as an additive (Col. 3, Ln. 10).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Number 4,173,668 to Hentzelt shows a fire-screening panel. The panel includes a layer of intumescent material.

US Patent Number 4,681,810 to Gomez shows a fire-resistant interlayer. The interlayer is composed of phosphate and silica.

US Patent Number 4,913,847 to Tunker shows a fire-retardant mass and method of making the same. The fire-retardant mass is composed of an aluminum phosphate and boric acid.

US Patent Number 4,992,481 to von Bonin shows a fire retardant element made of foam moldings.

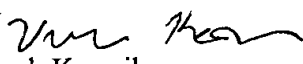
US Patent Number 6,379,825 shows a transparent heat-swellaable material. The panel is composed of a hydrated alkali metal silicate along with several additives.

Art Unit: 1775

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Vivek Koppikar** whose telephone number is **(703) 305-6618**. The examiner can normally be reached on Monday-Friday from 8 AM to 5 PM, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached at (703) 308-3822. The fax phone numbers for the organization where this application or proceeding are assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Vivek Koppikar

9/30/02


DEBORAH JONES
SUPERVISORY PATENT EXAMINER